

# AirEther™ BR300/BR300E

## 802.11a/n MIMO Outdoor AP/Router/Bridge System



Inscape Data's AirEther™ BR300 802.11a/n 2x2 MIMO Outdoor Wireless Bridge/Router/Repeater/AP is designed for outdoor long-range wireless communication. Based on the IEEE 802.11 a/n standards operating on 5GHz frequency, the AirEther BR300 & BR300E is an ideal cost-effective solutions for point to point or point to multi-point wireless bridge networks. Ideal for parking lot or perimeter wireless IP video and building-to-building network solution. The BR300 & BR300E product is capable of operating in multiple modes including wireless bridge, access point bridge, access point router, and repeater. The BR300 offers an integrated 18dBi antenna while the BR300E offers two external type N antenna connectors. The ruggedness of IP68 rated enclosure and extreme temperature ratings along with host of product features makes the AirEther BR series product the choice for every wireless bridging applications.

Our AirEther wireless products are designed with the Power over Ethernet (PoE) feature, which allows power and data transmitted over a single network cable. This capability provides for simple, convenient installation. When you use with one of the Inscape Data LPS1000/2000/3000 Outdoor PoE Switch products and network with any of the NVC Series Cameras, all the wireless devices and the cameras are networked within a single outdoor LAN (local Area Network). It becomes much easier to manage, integrate, install, maintain, and troubleshoot. Based on Inscape Data's patent-pending technology, our new Outdoor PoE Switch greatly lessens challenges for outdoor LAN design, integration, and deployment.

### APPLICATIONS



### KEY FEATURES & BENEFITS

#### Industrial Quality

Long range wireless solutions built with industrial components offering high reliability, availability, and low maintenance. The IP68 compliant weatherproof enclosure, military type antenna connectors, and extreme weather rating electronic components continue to perform in the most extreme weather conditions.

#### License Free Long Range Operation

License free 5 GHz operation offers over 17 non-overlapping channels for the most flexible interference free application scenario without the need for regulatory frequency licensing.

#### FIPS-140-2 Security Supported

This product supports the federal information processing standard (FIPS-140-2) cryptographic module to be used for sensitive government and healthcare applications.

#### Integrated 18dBi 5 GHz 2x2 MiMo Antenna (BR300 Only)

Internal 5GHz antenna offers up to 300 mbps data rate in an easy to install form factor.

#### Industrial external N-type antenna connector (BR300E Only)

Two external antenna connectors for 5Ghz omni-directional, sector, or high gain antenna.

\* Product photo shown with optional dual 9dBi omni-directional antenna

#### Wireless Multimedia

Based on the IEEE 802.11e standard, Wireless multimedia (WMM) provides enhancement for voice and video over IP applications

#### Multifunctional Signal Strength LED

Six easy to read signal strength LED offers easy alignment and system configuration

#### Multi-Mode Configuration

Single device with up to four modes of operation: IEEE compliant 802.11a/n Access Point, Wireless Bridge, Wireless Repeater, and Wireless Router

#### Power over Ethernet

The built-in 12VDC Passive PoE feature eliminates power connection at the camera location. This eliminates the need of running an additional power line cable.

#### Integrated Wireless Interference Utility

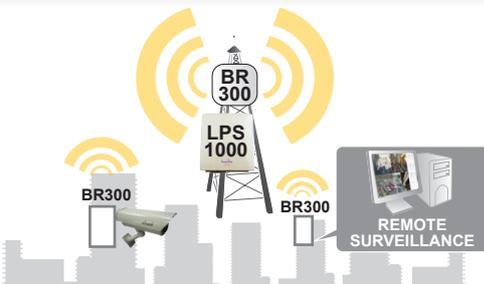
Wireless interference utility built into every radio for simplified frequency planning and installation.

#### Secure Wireless Transmission

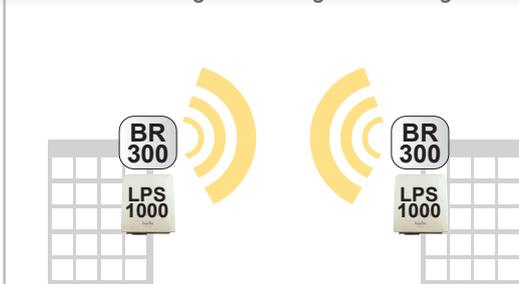
Equipped with Government Strength Advance Encryption System (AES), transmission of top level information is highly secure with the AirEther outdoor wireless system.

### SYSTEM CONFIGURATIONS

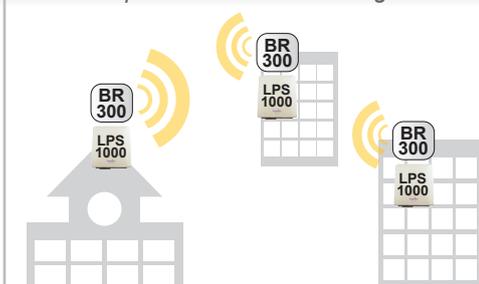
#### Outdoor Wireless IP Video Surveillance



#### Building to Building Networking



#### Campus Wide Wireless Bridge



RX SPECIFICATIONS							
	DataRate	Sensitivity	Tolerance		DataRate	Sensitivity	Tolerance
802.11a	6M	-95dBm	±2dB	802.11a	24M	-95dBm	±2dB
	9M	-95dBm	±2dB		36M	-94dBm	±2dB
	12M	-94dBm	±2dB		48M	-93dBm	±2dB
	18M	-92dBm	±2dB		54M	-91dBm	±2dB
5 GHz 11n HT20	MCS 0	-95dBm	±2dB	5 GHz 11n HT40	MCS 0	-93dBm	±2dB
	MCS 1	-93dBm	±2dB		MCS 1	-91dBm	±2dB
	MCS 2	-92dBm	±2dB		MCS 2	-88dBm	±2dB
	MCS 3	-87dBm	±2dB		MCS 3	-85dBm	±2dB
	MCS 4	-84dBm	±2dB		MCS 4	-82dBm	±2dB
	MCS 5	-80dBm	±2dB		MCS 5	-78dBm	±2dB
	MCS 6	-78dBm	±2dB		MCS 6	-75dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-95dBm	±2dB		MCS 8	-92dBm	±2dB
	MCS 9	-93dBm	±2dB		MCS 9	-90dBm	±2dB
	MCS 10	-91dBm	±2dB		MCS 10	-87dBm	±2dB
	MCS 11	-86dBm	±2dB		MCS 11	-84dBm	±2dB
	MCS 12	-83dBm	±2dB		MCS 12	-81dBm	±2dB
	MCS 13	-80dBm	±2dB		MCS 13	-77dBm	±2dB
	MCS 14	-77dBm	±2dB		MCS 14	-74dBm	±2dB
	MCS 15	-74dBm	±2dB		MCS 15	-71dBm	±2dB
	MCS 16	-93dBm	±2dB		MCS 16	-91dBm	±2dB
	MCS 17	-91dBm	±2dB		MCS 17	-87dBm	±2dB
	MCS 18	-90dBm	±2dB		MCS 18	-84dBm	±2dB
	MCS 19	-85dBm	±2dB		MCS 19	-80dBm	±2dB
	MCS 20	-82dBm	±2dB		MCS 20	-78dBm	±2dB
	MCS 21	-78dBm	±2dB		MCS 21	-75dBm	±2dB
	MCS 22	-75dBm	±2dB		MCS 22	-71dBm	±2dB
MCS 23	-72dBm	±2dB	MCS 23	-69dBm	±2dB		



Height: 9.6" (244mm)  
Width: 7.9" (201mm)  
Depth: 3.25" (83mm)

ACCESSORIES

PIS200  
Dual-Port DC PoE Injector  
with Surge Suppressor



LSS0001  
RF Lighting Arrestor  
(0 to 6GHz)



AC100 1M  
Low Loss Antenna Cable,  
N-Male to N-Male



WC Series  
Outdoor UV protected 25, 50, 75, 100 FT  
CAT5 Network Cable



Omni-Directional Antenna

OA09	OA12	OA15
2.4GHz	2.4GHz	2.4GHz
9dBi	12dBi	15dBi

Panel MIMO Antenna (Dual Polarity)

PA12M	PA18M	PA21M	PA5G14M	PA5G18M
2.4GHz	2.4GHz	2.4GHz	5GHz	5GHz
12dBi	18dBi	21dBi	14dBi	18dBi

Parabolic Dish MIMO Antenna (Dual Polarity)

DA5G25M	DA5G28M	DA5G32M
5GHz	5GHz	5GHz
25dBi	28dBi	32dBi

COMPATIBILITY

- LPS2000/3000 5-Port Gigabit Managed and Non-Managed PoE Switches
- LPS1000 Adjustable Voltage Outdoor 5-Port PoE Switch
- SB300 802.11b/g/n MIMO Outdoor AP/Router/Bridge/Repeater System
- NVC IP Video Camera
- NVS IP Video Server

PACKAGE CONTENT

- BR300 or BR300E
- 12VDC AC/DC Power Adapter
- WC002 Weatherproof Connector Set
- PIS100 1-Port DC PoE Injector with Surge Suppressor
- User Manual Resource Disc
- Pole Mount Bracket (BR300 Only), A Pair of 4" Stainless Worm Gear Hose Clamp for Mast Mounting (BR300E Only)
- Installation Guide and Warranty

Wireless Standards	IEEE 802.11a/n, 802.11h TPC, DFS, 802.11d, 802.11x, 802.11i
Data Rates	300 mbps
Radio Chains	2 x 2 Spatial Multiplexing
Spatial Streams	2
RF Transmit Power	22 dBm / 160 mW
Channel Width	• 20MHz • 40MHz
Frequency Band	• 5.150 ~ 5.350 GHz, 5.470 ~ 5.725GHz, 5.725 ~ 5.850 GHz (US & Canada) • 5.150 ~ 5.350 GHz, 5.470 ~ 5.725GHz, 5.725 ~ 5.875 GHz (Europe) • 5.150 ~ 5.250 GHz, 5.250 ~ 5.350GHz, 5.470 ~ 5.725GHz(Japan)
Modulation	• OFDM: BPSK, QPSK, 16-QAM, 64-QAM • DSSS: DBPSK, DQPSK, CCK
Operating Channels	• 5 GHz channels: Country dependent for the following channel ranges: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165, 169, 173
Receiver Sensitivity	• 802.11a 6m @ -94dBm, 54m @ -75dBm • 802.11n 5G HT20 MCS0 @ -93dBm, MCS7 @ -72dBm • 802.11n 5G HT40 MCS0 @ -90dBm, MCS7 @ -70dBm
BSSID	4
Wireless Security	• WPA, WPA2, PSK, RADIUS • AES-CMP, TKIP, 64/128/152bit WEP • 802.11x • 802.11i AES • Hide SSID • Client Isolation • NIST FIPS-140-2 Level 2
Quality of Service Management	Wireless Multimedia
Device Reset	• Push Button • IP Locator Utility • DHCP Client • DHCP Server • Bandwidth Control
Operation Mode	• Access Point • Point to Point & Multipoint Bridge • Repeater Mode • Access Point Client • WDS • Router
Security	• HTTP or HTTPS login • Read Only Account • ACL List • NIST FIPS-140-2 Level 2
Configuration	• NTP • Bridged Station List • Site Survey • HTTP Web based configuration • Failback IP • Static, DHCP Client, PPPoE • Message Log • Configuration file backup/Restore • Statistics support • Telnet • SSH • SNMP v2c • Ping Watchdog • Auto-Reboot • Host Name • VPN Pass Through
Device Upgrade	Web Based via Software
Network	• NAT • STP • DMZ • IP/Port Forwarding • Static Routing • RIP v1 & v2 • VLAN Tag support • Firewall • UPnp • Multicast Routing • 128 Maximum Ethernet Clients Supported
Operating System	Windows 7, Windows Vista, Windows XP, Windows 2000
Physical & Environmental	
Weatherproof PoE Port	1
Integrated Antenna	18 dBi 5GHz 2 x 2 MIMO Panel Antenna
Type N Antenna Connector (BR300E Only)	2
LED Indicator	Power, WLAN, LAN, Signal Strength
Humidity	Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Temperature	Operating: -40°C to +85°C Storage: -40°C to 90°C
Device Dimension	7.50" x 4.73" x 1.84"
Package Shipping Weight	5 lbs
Power	
Standby	4 W
Max Consumption	5.7 W
Passive PoE	4.5(+), 7.8 (-) Input Range 9V - 24V DC 1 x RJ45 In (Data 1,2,3,6) 1 x RJ45 Out (Data 1,2,3,6, Power 4,5 (+), 7,8(-) 1 x 2.5mm Barrel Jack for 24VDC Input
PIP100 PoE Injector	100 meters / 300 feet @ 24VDC
Max PoE Cable Length	
Compliance	
Wireless	FCC, CE, ETSI, Japan
Mechanical	IP68, ROHS



THE LEADING  
OUTDOOR NETWORK  
APPLIANCE COMPANY

Product Information Online: <http://www.inscapedata.com/br300.htm>

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Total Turnkey Solutions for Outdoor PoE, Wired/Wireless, and IP Video Applications

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